

REMARKS

In conjunction with the filing of the above continuation application, Applicant cancels Claims 1-5 and 12-21.

Claims 6-11 have been amended to further define the roofing panel product of the present invention. These panels have at least one indented peripheral edge loosely joinable with a respective foam roofing panel having a reciprocal indented peripheral edge, but where the fit is not exact, so that a loose fit is made between two or more panels, leaving a gap therebetween to allow adhesive to fill the gaps upon rising, thus joining the two or more panels together.

Claims 22-26 define a plurality of roofing panels having at least one peripheral edge engageable with at least one further peripheral edge of a respective panel of one or more roofing panels, whereby the indentations in the respective peripheral edges are not identical in size, so that, when joined together, they form a loose fit forming a gap therebetween for filling with rising adhesive within the gap, joining the roofing panels together.

New Claims 27 and 28 define the top bonded fabric layer as a non-woven polyester fabric bonded to the respective foam block of each respective panel. Support for the term "bonded fabric" by itself without the preferable non-woven polyester fabric is noted in the Abstract.

With respect to prior art for panels noted by the Examiner in the prior parent patent application filed under Serial No. 10/022,612, please note the following:

Haage (U.S. Patent No. 3,984,270) is a process of roof construction using fillets of foamed PVC between insulating panels. In one instance, the insulating panels have edges similar to ship lap edges and the fillets are Z-shaped to fit between these panels. A continuous sheet covering of PVC is solvent welded to the PVC foam fillets used. However the panels are held together in a tight fit, unlike the loose fit between adjacent panels of the present invention, which provides a gap between respective panels for subsequent filling of the gap with rising adhesive therebetween.

Lang (U.S. Patent No. 3,302,362) is a method of creating a roof structure by using foamed-in-place insulating material between beams and then covering it with two membrane layers. Discrete foam panels are not used.

Prusinski (U.S. Patent No. 3,232,017) is a structural foam core panel with an ornamental two-layer resinous surface incorporating decorative mineral elements. It is used for exterior building walls.

Pilgrim (U.S. Patent No. 4,303,722) is a process for providing a facing of web inorganic fabric such as glass fiber

tissue bonded to a core such as gypsum board. This is not a foam roofing panel.

McDermott (U.S. Patent No. 4,393,634) deals with a process for making needle punched synthetic polyester fabric for covering a roof incorporating insulating panels prior to asphalt impregnation. There is no detail regarding the insulating panels besides a suggestion that they could be Pearlite.

Carlson (U.S. Patent No. 4,288,951) describes the use of insulating blocks as an underlayment in a system for using insulating roofing panels for a mobile home or other metal building. Unlike the loose joints with gaps between panels of the present invention, the foam panels of Carlson '951 have tight ship lap edges and are overlaid with a separate top sheet that also covers the joints.

Saidla (U.S. Patent No. 4,130,614) includes a dense foam on top of a less dense foam and a woven fiber reinforcing sheet imbedded between the dense foam and the less dense foam. It does not describe a top layer of a bonded fabric, and does not describe discrete foam roofing panels having indented peripheral edges which form loose joints with gaps therebetween for filling with a rising adhesive to form a monolithic roof out of discrete panels.

Stewart (U.S. Patent No. 4,036,395) is a roof deck system using foam panels with bonded top and bottom membranes. The bottom membrane overlaps the panel so that, when abutted, a channel is formed between panels to receive mechanical fasteners to deck. The channels are later filled with foam sealant and covered with a strip of membrane similar to the top layer.

Van Wagoner (U.S. Patent No. 4,021,981) describes rigid insulative panels (which may be polyurethane foam) having a self-adhesive water-impermeable bottom layer for attachment to decking material. An optional top protective layer of water-impermeable but vapor permeable material such as concrete, epoxy, clay, tile, or cement-asbestos is used. The panels have smooth, unindented peripheral edges and are installed spaced from one another to provide smooth expansion joints. These are filled with a pressure-forced self-adhesive water and vapor impermeable compound.

Vahna (U.S. Patent No. 4,400,425) concerns composite panels. Composite fiberglass-reinforced plastic panels (one with a foam core) are described. They use woven mats of adhesive-activated polyester in a resin matrix.

Venable (U.S. Patent No. 4,996,812) describes a method of manually applying strips of membrane over a roof structure, such as metal decking with an insulating foam layer. The method uses sprayed-on adhesive and a waterproof membrane with a fleece like underside layer. No discrete foam panels with indented peripheral edges are discussed.

Howland (U.S. Patent No. 5,317,852) describes roof construction for leak detection. In roofing using a continuous waterproof membrane, it causes leakage to become visible adjacent leak location by providing localized passages through subroof layers at closely-spaced intervals. Figure 1 shows roofing panels with notched corners.

Seem (U.S. Patent No. 5,394,672) describes roofing panels incorporating a foam panel with a structural rigid layer of plywood or flakeboard on top. Both layers are then encased in metal skin layers and sealed in metal at the edges. The edges are formed with features that permit nailing of an edge with the edge of the adjacent board having a nose which locks-in mechanically and are sealed with adhesive beads and a foam strip within the edge cavity.

Eaton (U.S. Patent No. 5,441,583) deals with the use of a multiple bead adhesive foam applicator machine to lay down

adhesive over roofing panels to attach a continuous membrane. Roofing panels with butt joints are shown in the figures.

Morris (U.S. Patent No. 5,600,929) entitled "Fire Retardant Roofing Adhesive and Method of Applying Same" aptly describes a roof including a metal deck, foam layer on deck, rigid panels on foam layer, and top membrane. The adhesive is used to attach the various layers. There is no use of flat foam panel boards.

Cox (U.S. Patent No. 6,418,687) describes an insulated roof system, which uses a foamed-in-place insulating layer covered by a rubber membrane. No discrete foam roofing panels are used.


Kelch (U.S. Patent No. 5,695,870) is a double sided foam core high strength laminated wall board is described. In one instance, the foam core is polyurethane with a density of 10-70 Kg/ cu. meter (.62-4.36 pounds per cubic foot). The core density encompasses 2.5-3.16 pounds/cubic foot. No edge definition is given.

No new matter is introduced to the specification by the foregoing amendment.

Prior to an examination on the merits, please enter the foregoing preliminary amendment.

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Respectfully submitted,



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